

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims of the application.

Listing of Claims:

1. (Withdrawn) A method of preparing a cured laminate comprising the steps of:
 - a) applying onto a first substrate, a curable clay composition comprising:
 - i) a curable medium comprising at least one ethylenically unsaturated compound selected from the group consisting of ethylenically unsaturated monomer and ethylenically unsaturated oligomer; and
 - ii) from 0.5 to 20 weight %, based on a total weight of said curable clay composition, of exfoliated clay platelets dispersed in said curable medium;
 - b) contacting a second substrate with said curable clay composition to provide an uncured laminate, wherein said curable clay composition is in contact with said first substrate and said second substrate; and
 - c) subjecting said uncured laminate to electron beam radiation to provide said cured laminate.
2. (Withdrawn) The method according to claim 1 wherein said curable medium further comprises at least one soluble polymer.
3. (Withdrawn) A method of preparing a coated substrate comprising the steps of:
 - a) preparing an uncured coated substrate by applying onto a substrate, a curable clay composition comprising:
 - i) a curable medium comprising at least one ethylenically unsaturated compound selected from the group consisting of ethylenically unsaturated monomer and ethylenically unsaturated oligomer; and
 - ii) from 0.5 to 20 weight %, based on a total weight of said curable clay composition, of exfoliated clay platelets dispersed in said curable medium; and
 - b) subjecting said uncured coated substrate to electron beam radiation to provide said coated substrate.
4. (Withdrawn) The method according to claim 2 wherein said curable medium further comprises at least one soluble polymer.
5. (Original) A curable clay composition comprising:
 - a) a curable medium comprising at least one ethylenically unsaturated compound selected from the group consisting of ethylenically unsaturated monomer and ethylenically unsaturated oligomer; and
 - b) from 0.5 to 20 weight %, based on a total weight of said curable clay composition; of exfoliated clay platelets dispersed in said curable medium;wherein said curable clay composition is substantially free of photoinitiator.

6. (Original) The curable composition according to claim 5 wherein said curable medium comprises a weight ratio of said ethylenically unsaturated monomer to said ethylenically unsaturated oligomer in the range of 10:1 to 1:2.

7. (Original) A curable clay composition comprising:

a) a curable medium comprising:

i) from 40 to 98.5 weight % of at least one ethylenically unsaturated compound selected from the group consisting of ethylenically unsaturated monomer and ethylenically unsaturated oligomer; and

ii) from 1 to 40 weight % soluble polymer; and

b) from 0.5 to 20 weight % exfoliated clay platelets dispersed in said curable medium; wherein all weight % are based on total weight of said curable clay composition.

8. (Original) The curable composition according to claim 7 wherein said curable medium comprises a weight ratio of said ethylenically unsaturated monomer to said ethylenically unsaturated oligomer in the range of 10:1 to 1:2.

9. (Withdrawn) A method for preparing an curable clay composition comprising exfoliated clay platelets dispersed in a curable medium, comprising the steps of:

a) providing a first mixture comprising:

i) clay particles comprising stacks of clay platelets, and

ii) said curable medium comprising at least one ethylenically unsaturated compound selected from the group consisting of ethylenically unsaturated monomers and ethylenically unsaturated oligomers; and

b) processing said first mixture in a moving media mill to separate said clay platelets from said stacks to provide said exfoliated clay platelets dispersed in said curable medium.

10. (Withdrawn) The method according to claim 9 wherein said curable medium comprises a weight ratio of said ethylenically unsaturated monomer to said ethylenically unsaturated oligomer in the range of 10:1 to 1:2.

11. (New) The curable clay composition of claim 5 further comprising less than 5 weight %, based on the weight of the curable clay composition, solvent.

12. (New) The curable clay composition of claim 5 wherein said curable medium comprises from 40 to 99.5 weight %, based on the weight of the curable clay composition, ethylenically unsaturated compound.

13. (New) The curable clay composition of claim 5 wherein said curable medium comprises from 45 to 85 weight %, based on the weight of the curable clay composition, ethylenically unsaturated compound.

14. (New) The curable clay composition of claim 5 wherein said curable medium comprises from 50 to 80 weight %, based on the weight of the curable clay composition, ethylenically unsaturated compound.

15. (New) The curable clay composition of claim 5 wherein said curable medium further comprises at least one soluble polymer.

16. (New) The curable clay composition of claim 5 wherein said curable medium further comprises 0 to 40 weight %, based on the weight of the curable clay composition, of at least one soluble polymer.

17. (New) The curable clay composition of claim 5 wherein said curable medium further comprises 2 to 30 weight %, based on the weight of the curable clay composition, of at least one soluble polymer.

18. (New) The curable clay composition of claim 7 further comprising less than 5 weight %, based on the weight of the curable clay composition, solvent.

19. (New) The curable clay composition of claim 7 wherein said curable medium further comprises at least one soluble polymer.

20. (New) The curable clay composition of claim 7 wherein said curable medium further comprises 0 to 40 weight %, based on the weight of the curable clay composition, of at least one soluble polymer.

21. (New) The curable clay composition of claim 7 wherein said curable medium further comprises 2 to 30 weight %, based on the weight of the curable clay composition, of at least one soluble polymer.

22. (New) The curable clay composition of claim 7 wherein said curable medium comprises from 45 to 85 weight %, based on the weight of the curable clay composition, ethylenically unsaturated compound.

23. (New) The curable clay composition of claim 7 wherein said curable medium comprises from 50 to 80 weight %, based on the weight of the curable clay composition, ethylenically unsaturated compound.